[FAULT IDENTIFICATION DUE TO DEMAGNETIZATION FOR A MOTOR IN AN ELECTRIC OR PARTIALLY ELECTRIC MOTOR VEHICLE]

Abstract of Disclosure

In an electric or hybrid electric vehicle, a voltage monitor (102) is directly coupled to a traction motor (38) and/or generator motor (30) to detect a permanent magnet induced voltage within the motor at a predetermined speed and no load condition. A controller (100) compares the detected permanent magnet induced voltage with an expected reference voltage that represents an expected permanent magnet induced voltage at full magnetization and the predetermined speed. The comparison includes identifying points of synchronization and using those points to determine a difference in the detected permanent magnet induced voltage that is caused by a faulty component.

Figures